Mechanical Compliance Certificate for Complex Systems for the 2000 IECC

ALL INFORMATION MUST BE FILLED IN - PRINT CLEARLY

Section 1 - Project Information

Project Name		Permit #
Address		Date
Owner/Agent	Telephone	Checked By
Documentation Author	Telephone	Date For Department Use Only

Section 2 - General Information

Building Floor Area _____ sf

Project Description ☐ New Construction ☐ Addition ☐ Alteration ☐ Unconditioned Shell

Section 3 - Requirements Checklist

	Inspection Date	Approved By	Notes
Load Calculations			
• Load calculations per 1997 ASHRAE Fundamentals and • Capacities shown on plans	_____	_____	
Equipment Efficiency			
• Newly purchased equipment covered by mfr. Std. or ☐ • Meets efficiency requirements in table ☐	_____	_____	
HVAC System Controls			
• Minimum one temperature control device per zone	_____	_____	
• Minimum thermostat capabilities: - Minimum 5° F deadband - Setback/setup capability to 55°F (htg.) & 85°F (clg.) - 7-day clock, 2-hr occupant override, 10-hr backup Thermostat setback capability exceptions: multifamily residential ☐ hotel/motel guest rooms ☐ areas that operate continuously ☐	_____	_____	
• Heat pump thermostat used with supplemental electric resistance heat	_____	_____	
Outdoor-Air Ventilation			
• In accordance with Chapter 4 of the IMC	_____	_____	
• Automatic shut-off dampers on supply and exhaust systems with airflow >3,000 cfm	_____	_____	
Economizers			
• Economizers on systems ≥90,000 Btu/h or ≥3,000 cfm Exceptions: exempted climate zone ☐ supermarkets, residential, hotel guest rooms ☐ high-efficiency cooling equipment tradeoff ☐ minimum EER: _____ EER: _____ other _____ ☐	_____	_____	
Hydronic Systems Control			
• Separate hot and cold water supplies and returns	_____	_____	
• No capability for concurrent hot and chilled water supply to terminals Exception: zones with special humidity requirements ☐	_____	_____	
• Hydronic systems $ 600 kBtu/h have: - reset controls for supply water temperature or ☐ - mechanical or electrical adjustable-speed pump drive(s) or ☐ - multiple-stage pumps or ☐ - other system controls that reduce pump flow by at least 50% based on load (calculations required) ☐			

Mechanical Compliance Certificate for Complex Systems(Continued)

Section 3 - Requirements Checklist

	Inspection Date	Approved By	Notes
Variable Air Volume Fan Control			
• Systems serving more than one zone are VAV Exceptions: - special pressurization relationships ☐ - 75% energy recovery ☐ - special humidity requirements ☐ - zone supply <300 cfm & <10% of total fan supply ☐ - where reheated/recooled air < min OSA req. ☐ - sequential controls that prevent reheat/recool ☐			
• VAV fans with motors $ 25 hp: - have mech. or elec. variable speed drive(s) or ☐ - are vane-axial fans with variable pitch blades or ☐ - have other controls that reduce motor demand to 50% design kW at 50% design flow (calcs. req.) ☐			
• Controls are capable of resetting supply air temp (SAT) by 25% of (SAT - room temp) difference			
• Single-duct VAV terminals are capable of reducing primary air before reheating			
• Dual-duct VAV mixing boxes are installed to minimize mixing			
Duct Construction			
• Duct insulation meets minimum R-values - Ducts in unconditioned spaces R-value _____ - Ducts outside the building R-value _____			
• Ducts sealed - Joints and seams on ductwork fastened and sealed per UL 181A or B (no duct tape as primary sealant)			
- Systems with $3" wg sealed in accordance with SMACNA Leakage Class (CL) < 6.0			
Hydronic Heating Systems			
• Pipe insulation: - ½ in. orheating coil branches - 1½ in. orcirculation loops			
• Part-load efficiency method: - temperature reset or ☐ - variable flow ☐			
HVAC System Completion			
• Balancing devices in accordance with IMC 603.15			
• Balancing and pressure test connections on all hydronic terminal devices			
• O & M manual(s) provided to building owner			

Section 4 - Compliance Statement

The proposed mechanical design represented in these documents is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical system has been designed to meet the 2000 IECC mechanical requirements using COM*check-EZ™ Version 2.1.*

Principal Mechanical Designer – Name	Signature	Date

NOTE: *This form is required on project plans.*